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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/896,381

06/29/2001

Zhiyong Zhao

TT4315

9540

7590

06/16/2004

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EXAMINER

TRAN, HUAN HUU

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/896,381	<b>Applicant(s)</b> ZHAO ET AL.	
	<b>Examiner</b> Huan H. Tran	<b>Art Unit</b> 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 02/02/04.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 and 19-24 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-24 is/are allowed.
- 6) ☒ Claim(s) 1, 5-10 and 12-17 is/are rejected.
- 7) ☒ Claim(s) 2-4 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Thomas et al. (WO 99/66549).

Thomas et al. discloses a depolarization method comprising the step of selectively exposing a portion of a fabrication tool (chuck 1 which comprises an insulating pad 2) to a plasma for a selected time interval (page 2, lines 22-25; page 5, lines 18-21), wherein said selected time interval has a duration sufficient (page 8, lines 12-16) to reduce a polarization of said portion of said fabrication tool whereby interference with a motion of a device (wafer 6) being processed by said fabrication tool is not observed.

AS to claims 6 and 7, Thomas et al. teaches the limitation "The method of claim 1 wherein said plasma comprises a plasma formed from a noble gas" and "The method of claim 6 wherein said noble gas is selected from the group consisting of xenon and argon" (page 4, lines 17-19).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

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art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al. in view of Vella or Farley et al.

As to claims 8-10 and 12; 14-17 Thomas et al. does not particularly teach the step of generating the plasma with a plasma flood gun (page 4, lines 16-17).

Vella teaches the use of a plasma flood gun (100 with reference to Figs. 2-7A and 9) for generating plasma (Col. 3, line 57; col. 4, lines 24-26).

Vella teaches positioning of the plasma generator close to the target region (col. 4, lines 11-14)

Farley et al. teaches the use of a plasma flood gun (100 with reference to Figs. 2-7A and 9) for generating plasma formed from a noble gas such as xenon or argon to neutralize the ion beam and the work surface.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a noble gas plasma generator as taught by Vella or Farley et al. in the device/method of Thomas et al. to introduce a neutralizing charge to the fabricating tool (chuck 1).

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al.

Thomas et al. discloses the claimed invention except for the claimed range of the preselected time interval (page 4, lines 24-28).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the time interval for exposing the fabrication tool to a plasma to eliminate electrostatic charge, since it has been held that where the general conditions of a claim are disclosed in

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the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

***Allowable Subject Matter***

6. Claims 2, 3, 4, 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 19-24 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

As to claim 2, prior art do not teach or suggest the limitation "wherein said step of selectively exposing said portion of said fabrication tool includes selecting for exposing said portion of said fabrication tool at preselected intervals of time, and exposing said portion if interference with said motion of said device is observed" (emphasis added)

As to claim 3, prior art do not teach or suggest the limitation "The method of claim 2 further comprising the step of detecting said interference with said motion of said device".

AS to claim 4, prior art do not teach or suggest the limitation "The method of claim 3 wherein said step of detecting said interference with said motion comprises step of detecting a misalignment of said device with respect to said portion of said fabrication tool".

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As to claim 11, prior art do not teach or suggest the limitation "The method of claim 10 wherein said arc discharge has a voltage drop between said cathode and said anode of between ten and thirty volts"

As to claim 19 and dependent claims thereof, prior art do not teach or suggest the limitation "selectively exposing a portion of a fabrication tool to a plasma for a selected time interval wherein said step of selectively exposing a said portion of said fabrication tool includes exposing said portion of said fabrication tool if interference with a motion of a device being processed in said fabrication tool is observed" (emphasis added)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huan H. Tran whose telephone number is (571) 272-2261. The examiner can normally be reached on M-F with Monday off, from 7:30am to 6pm.

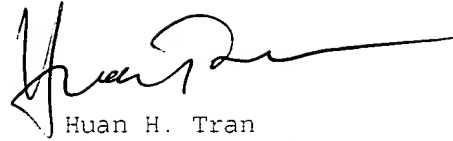
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Huan H. Tran', with a long horizontal flourish extending to the right.

Huan H. Tran  
Primary Examiner  
Art Unit 2861

hht  
06/13/2004